



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,615	07/02/2007	Kunitoshi Watanabe	70642	7889
85981	7590	02/01/2011		
Syngenta Corp Protection, Inc. 410 Swing Road Greensboro, NC 27409			EXAMINER PAK, JOHN D	
			ART UNIT	PAPER NUMBER
			1616	
			MAIL DATE	DELIVERY MODE
			02/01/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/598,615

Applicant(s)

WATANABE ET AL.

Examiner

John Pak

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/6/06</u> | 6) <input type="checkbox"/> Other: _____ |

Claims 1-17 are pending in this application.

Applicant's election without traverse of the invention of Group I, in the response filed on 11/8/2010, is acknowledged. Even though the election was without traverse, applicant comments that search and examination of Groups I to IV would not be unduly burdensome. The Examiner cannot agree, as the different invention groups require searching in separate classification areas. The neonicotinoids are classified in various places *such as* class 514, subclasses 229.2 (thiamethoxam) and 357 (acetamiprid); organic phosphorus-based compounds are classified in various places such as class 514, subclasses 75 to 148; synthetic pyrethroids are classified in various places such as class 514, subclasses 519, 521-522; and carbamates are classified in various places such as class 514, subclasses 476+. Under the facts of this application, the additional search necessary for each extra invention would place an undue burden.

Claims 1-17 will presently be examined to the extent that they read on the elected subject matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) Claims 1-17 recite a method for obtaining lumber that does not require termite-proofing treatment following lumber production. This could be taken two ways.

First, this could mean obtaining lumber that will not necessarily be exposed to termites, e.g. lumber used to make furniture, toys, etc.; or second, this could mean obtaining lumber that will be exposed to termites but is already termite-proof. Alternative interpretations make the claim language confusing.

(2) Additionally, the claims are confusing because while the claims recite a method for "obtaining" lumber, there is no actual step for cutting down and processing the tree that's been injected with the tree trunk preparation. The claims therefore appear incomplete.

(3) In claims 2 and 11, "acetamidrid" is a misspelling of acetamiprid.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Grosman et al. (submitted by applicant, see the second non-patent literature in the IDS of 9/6/2006).

Grosman et al. explicitly disclose injecting, inter alia, emamectin + 5% thiamethoxam *or* 5% imidacloprid to loblolly pine trees by using a pressurized injection system, wherein 20-80 ml of the emamectin + thiamethoxam were administered or 30-

120 ml of imidacloprid were administered (page 147, "Materials and Methods" and Table 1). Pre-drilled holes were used (page 147, right column, last full paragraph). Insect damage to uncut trees is reduced, and protection duration is long-term (see entire article and the "Conclusions" section and table 4 on pages 151-52).

It is recognized that Grosman et al. do not explicitly disclose obtaining lumber. However, Grosman's trunk-injected loblolly pines are trees commonly used for lumber; and applicant's claims do not actually require a step of cutting the treated trees within a specified time after injection. Therefore, it is the Examiner's position that Grosman's disclosure is sufficient to anticipate the method that is currently claimed because the prior art teaches the same trees trunk-injected with the same neonicotinoid insecticide chemicals, as required by the rejected claims. The claims are thereby anticipated.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1616

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 8-175914¹ taken with the acknowledged prior art, in view of Kim et al.², Derwent abstract 1992-094612 and Senn (US 2003/0181448).

JP 8-175914 discloses injecting into a tree trunk a composition comprising (i) 1-50 wt% or 5-20 wt% of an insecticide that is poorly soluble in water, (ii) 1-60 wt% or 5-30 wt% of a nonionic surfactant, and (iii) 10-80 wt% or 30-70 wt% of water and/or solvent that can be mixed with water (see human translation of claims 1-3 and paragraphs 12-13 and 25). Suitable nonionic surfactants include polyoxyethylene hardened castor oil and polyoxyethylene alkyl ethers; and suitable solvents include lower alcohols, glycol esters and acetone (see the Derwent abstract). Method of first drilling a hole and then injecting the composition is disclosed (human translation of paragraph 13). Protection of pines from wilting or withering is obtained (human translation of paragraphs 13 and 25; see also "USE/ADVANTAGE" in the Derwent abstract).

Applicant acknowledges that rot-proofing and termite-proofing structural wood material by injecting into the trunks of standing trees is a known and easy method, but one that is "hardly used at all at present" because of poor efficiency (specification page

¹ Applicant submitted a Derwent abstract of this document. See the IDS of 9/6/2006, the third non-patent literature. This Office action will refer to this abstract for translation purposes. A full machine translation of the source document JP 8-175914 is provided herewith, as well as partial translation (human translation) of claims 1-3 and paragraphs 12, 13 and 25.

² Submitted by applicant in the IDS of 9/6/2006, the first non-patent literature.

2, lines 19-25). Injecting chemicals into lumber under pressure is also known (specification page 2, lines 24-25).

Kim et al. disclose trunk injection of 15% thiamethoxam to control *Corythucha ciliata* (sycamore lace bug).

Derwent abstract 1992-094612 discloses introducing insecticides into tree trunk through pre-drilled holes, which improves the quality of wood from treated tree during storage and transport due to reduction of pests. Systemic transportation of the insecticide throughout the trunk volume is disclosed.

Senn et al. disclose thiamethoxam as having termiticidal activity (see entire disclosure, in particular paragraphs 6-19, 21, 28). 0.1-99 wt% formulations are disclosed (paragraph 19). Protection of wood (paragraph 21) and plants in forestry (paragraph 28) from attack of various wood-destroying pests is disclosed.

The difference between the claimed invention and JP 8-175914 is that JP 8-175914 does not explicitly disclose obtaining termite-proofed lumber from trunk-injected trees, which has been injected with thiamethoxam.

Selection of thiamethoxam as the insecticide in JP 8-175914 would have been suggested from the excellent protective actions disclosed by Senn et al. and also from the known trunk injection application of thiamethoxam by Kim et al. Protection of pine trees (from JP 8-175914) trunk-injected with thiamethoxam against wood-destroying pests such as termites would have been suggested from the known insecticidal actions of trunk-injection applications (JP 8-175914; Kim et al.; Derwent abstract 1992-094612),

the known termiticidal activity of thiamethoxam (Senn et al.), and the known protection of wood produced from trunk-injected insecticides (acknowledged prior art; Derwent abstract 1992-094612).

The claim feature of drilling at least one hole at a location below a cut area of the tree would have been obvious for many reasons, including producing unmarked pieces of lumber. The claim feature of injecting under pressure would have been obvious for time and penetration efficiency.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references. Applicant's specification data has been reviewed in this regard, but it appears to show no more than the expected termite controlling activity from a known termiticide, thiamethoxam.

For these reasons, all claims must be rejected.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 8-175914 taken with the acknowledged prior art, in view of Kim et al., WO 2004/108372 and Senn (US 2003/0181448).

Teachings of all of the cited prior art except WO 2004/108372 were discussed above and the discussion there is incorporated herein by reference.

WO 2004/108372 discloses injecting insect controlling chemicals into a pre-drilled injection hole of a tree before being cut down for wood, which produces a functional wood having insect control properties (see English abstract).

The difference between the claimed invention and JP 8-175914 is that JP 8-175914 does not explicitly disclose obtaining termite-proofed lumber from trunk-injected trees, which has been injected with thiamethoxam.

Selection of thiamethoxam as the insecticide in JP 8-175914 would have been suggested from the excellent protective actions disclosed by Senn et al. and also from the known trunk injection application of thiamethoxam by Kim et al. Protection of pine trees (from JP 8-175914) trunk-injected with thiamethoxam against wood-destroying pests such as termites would have been suggested from the known insecticidal actions of trunk-injection applications (JP 8-175914; Kim et al.; WO 2004/108372), the known termiticidal activity of thiamethoxam (Senn et al.), and the known protection of wood produced from trunk-injected insecticides (acknowledged prior art; WO 2004/108372).

The claim feature of drilling at least one hole at a location below a cut area of the tree would have been obvious for many reasons, including producing unmarked pieces of lumber. The claim feature of injecting under pressure would have been obvious for time and penetration efficiency.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly

Art Unit: 1616

disclosed or suggested by the teachings of the cited references. Applicant's specification data has been reviewed in this regard, but it appears to show no more than the expected termite controlling activity from a known termiticide, thiamethoxam.

Publication date of WO 2004/108372 is before the filing date of the international application from which this 371 application is based but after the filing date of the foreign priority application, JP 2004-066675. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

For these reasons, all claims must be rejected.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 7-10 of copending Application No. 10/598,616, in view of the acknowledged prior art, Derwent abstract 1992-094612 and Senn (US 2003/0181448). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

Copending claims 1, 5, 7-10 are directed to methods for preventing damage to trees caused by various pests or diseases. The methods inject neonicotinoid-based insecticides clothianidin, dinotefuran or thiamethoxam into a tree trunk in compositions comprising the insecticide, water, organic solvent, and surfactant, all of which overlap with the ingredients and percentages of the instant application claims.

Applicant acknowledges that rot-proofing and termite-proofing structural wood material by injecting into the trunks of standing trees is a known and easy method, but one that is "hardly used at all at present" because of poor efficiency (specification page 2, lines 19-25). Injecting chemicals into lumber under pressure is also known (specification page 2, lines 24-25).

Derwent abstract 1992-094612 discloses introducing insecticides into tree trunk through pre-drilled holes, which improves the quality of wood from treated tree during

storage and transport due to reduction of pests. Systemic transportation of the insecticide throughout the trunk volume is disclosed.

Senn et al. disclose thiamethoxam as having termiticidal activity (see entire disclosure, in particular paragraphs 6-19, 21, 28). 0.1-99 wt% formulations are disclosed (paragraph 19). Protection of wood (paragraph 21) and plants in forestry (paragraph 28) from attack of various wood-destroying pests is disclosed.

The difference between the claimed invention and the invention of the copending claims is that the copending claimed invention does not explicitly disclose obtaining termite-proofed lumber from trunk-injected trees.

Protection of trees trunk-injected with thiamethoxam or other neonicotinoid insecticides from wood-destroying pests such as termites would have been suggested from the known insecticidal actions of trunk-injection applications (Derwent abstract 1992-094612), the known termiticidal activity of thiamethoxam (Senn et al.), and the known protection of wood produced from trunk-injected insecticides (acknowledged prior art; Derwent abstract 1992-094612).

The claim feature of drilling at least one hole at a location below a cut area of the tree would have been obvious for many reasons, including producing unmarked pieces of lumber. The claim feature of injecting under pressure would have been obvious for time and penetration efficiency.

Therefore, one of ordinary skill in the art would have recognized the instant invention as an obvious variation of the invention set forth in the copending application claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 10/598,615
Art Unit: 1616

Page 13

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Pak/
Primary Examiner, Art Unit 1616